

539,110

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
15 July 2004 (15.07.2004)

PCT

(10) International Publication Number  
**WO 2004/058147 A2**

- (51) International Patent Classification<sup>7</sup>: **A61K**
- (21) International Application Number:  
PCT/US2003/040090
- (22) International Filing Date:  
15 December 2003 (15.12.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/433,532 16 December 2002 (16.12.2002) US
- (71) Applicant (for all designated States except US): **DELIA-TROPH PHARMACEUTICALS INC.** [US/US]; 11588 Sorrento Valley Road, Suite 16, San Diego, CA 92075 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **FROST, Gregory, I.** [US/US]; 13662 Mercado Drive, Del Mar, CA 92014 (US). **KUNDU, Anirban** [US/US]; 3535 Monroe Avenue Ap-24, San Diego, CA 92116 (IN). **BOOKBINDER, Louis, H.** [US/US]; 14823 Gable Ridge Road, San Diego, CA 92128 (US).
- (74) Agent: **HAILE, Lisa, A.**; Gray Cary Ware & Freidenrich, LLP, 4365 Executive Drive, Suite 1100, San Diego, CA 92121-2133 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HUMAN CHONDROITINASE GLYCOPROTEIN (CHASEGP), PROCESS FOR PREPARING THE SAME, AND PHARMACEUTICAL COMPOSITIONS COMPRISING THEREOF

(57) Abstract: The invention relates to the discovery of a novel Chondroitinase Glycoproteins (CHASEGP's), methods of manufacture, and potential uses in conditions where removal of chondroitin sulfates may be of therapeutic benefit. Chondroitinase Glycoproteins require both a substantial portion of the catalytic domain of the CHASEGP polypeptide and asparagine-linked glycosylation for optimal chondroitinase activity. The invention also includes carboxy-terminal deletion variants of CHASEGP that result in secreted variants of the protein to facilitate manufacture of a recombinant CHASEGP. Further described are suitable formulations of a substantially purified recombinant CHASEGP glycoprotein derived from a eukaryotic cell that generate the proper glycosylation required for its optimal activity. CHASEGP is useful for the degradation of glycosaminoglycans and chondroitin sulfate proteoglycans under clinical conditions where their removal is of therapeutic value.

WO 2004/058147 A2